

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN DIEGO REGION**

**FACT SHEET**

**for**

**ORDER NO. R9-2005-0213  
WASTE DISCHARGE REQUIREMENTS AND  
SECTION 401 WATER QUALITY CERTIFICATION**

**for**

**SOUTHERN CALIFORNIA EDISON  
and  
SAN DIEGUITO RIVER PARK JOINT POWERS AUTHORITY,**

**SAN DIEGUITO LAGOON RESTORATION  
AND  
SAN DIEGUITO COAST TO CREST TRAIL,  
SAN DIEGO COUNTY, CALIFORNIA**

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## **1.0 APPLICANTS**

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Rosemead, California 91770

San Dieguito River Park Joint Powers Authority  
18372 Sycamore Creek Road  
Escondido, California 92025

## **2.0 PROJECT BACKGROUND**

Southern California Edison Company (SCE) is the majority owner and operator of the San Onofre Nuclear Generating Station (SONGS). The California Coastal Commission (CCC) issued a Coastal Development Permit (No. 6-81-330-A3, as amended; formerly permit No. 183-73) for the construction of SONGS Units 2 & 3 with the condition that SCE fund the independent evaluation of the impacts of SONGS' on the marine environment. The Coastal Development Permit (Permit) further requires that SCE mitigate any significant adverse impacts. The CCC determined that SONGS adversely impacted bightwide fish stocks and required SCE to mitigate those losses. As partial satisfaction of the mitigation requirements, SCE was required to create or substantially restore at least 150 acres of wetlands in Southern California.

After considering the results of a site-selection study that included an evaluation of eight potential sites throughout Southern California, the CCC concluded that the San Dieguito Lagoon in Del Mar offered the best opportunity for achieving the full objectives set forth in the Permit. A public working group consisting of resource agency representatives, non-governmental organizations, and interested members of the public worked together to develop a reasonable range of practicable alternatives for restoration of San Dieguito Lagoon. As required by the Permit, SCE submitted a Preliminary Restoration Plan for restoration of San Dieguito Lagoon to the CCC in September 1997. Following CCC approval of the Preliminary Restoration Plan in November 1997, the wetland restoration project entered the environmental review process pursuant to the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA).

The San Dieguito River Park Joint Powers Authority (JPA) took the role of state lead agency under CEQA and the U.S. Fish and Wildlife Service (USFWS) took the role of federal lead agency under NEPA. The JPA incorporated the SCE wetland restoration project into their overall Open Space Park Project (Park Project) for the San Dieguito River Valley area (Figure 1). A joint Environmental Impact Report/Environmental Impact Statement (EIR/S) was prepared for the entire San Dieguito Wetlands Restoration (Restoration Project) component of the Park Project, which includes the following elements: (1) creation or substantial restoration of 150 acres of tidal wetlands to fulfill SCE's SONGS Permit requirement, (2) restoration of additional wetland acreage for parties as yet unidentified, (3) creation of California least tern nesting sites, (4) establishment of public trails, and (5) a visitor center.

### **3.0 PROJECT DESCRIPTION**

The San Dieguito Lagoon Restoration and Coast to Crest Trail includes several major project components: (1) excavation and maintenance of the San Dieguito river inlet channel to maintain tidal exchange, (2) replenishment of beach sand on Del Mar Beach; (3) restoration of tidal wetland areas; (4) construction of berms and slope protection measures; (5) vegetation of upland dredge material disposal areas; (6) construction of nesting areas; (7) construction of a portion of the Coast to Crest Trail and associated water quality features; and (8) construction and operation of a wetland mitigation bank. Figures 2 and 3. show all of the project components.

SCE is responsible for implementation of the restoration components, while the San Dieguito River JPA is responsible for the construction and maintenance of the Coast to Crest trail and water quality features. The JPA is also responsible for the revegetation of upland areas except for dredge material disposal sites which will be revegetated by SCE. SCE will construct the California least tern nesting sites, but the 22<sup>nd</sup> District Agricultural Association will be responsible for their long-term maintenance. In accordance with the California Coastal Commission's permit for the operation of the San Onofre Nuclear Generating Station (SONGS), SCE is responsible for the long-term maintenance of the restoration areas for the operating life of SONGS (presently estimated at 40 years). After SCE has fulfilled their maintenance obligations, restoration areas would then be the responsibility of the JPA.

#### **3.1 Excavation and Maintenance of the San Dieguito River Inlet Channel**

An open inlet is critical for the long-term health of the lagoon and is necessary to support the areas of created coastal salt marsh. San Dieguito Lagoon does not currently have a sufficient tidal prism to maintain a permanently open inlet. Even with implementation of the restoration, which will result in a 135 to 150 percent increase, the tidal prism will not be sufficient to maintain an open inlet. Therefore, SCE will conduct a one-time dredging event to restore the lagoon inlet and will conduct maintenance dredging approximately every eight months. The dredge area and frequency were chosen to maintain satisfactory tidal mixing while avoiding excessive channel deepening that would lead to accelerated sand incursion and the need for additional dredging.

The initial dredge event will remove up to 89,100 cubic yards of sand from the inlet channel at the Pacific Ocean to the Jimmy Durante Bridge. A large portion of the sand within the inlet was naturally removed from the inlet during the 2004-2005 rainy season. The actual volume of sand that will need to be removed during the initial dredging event may be significantly less than the originally estimated 89,100 cubic yards. Surveys will be conducted immediately prior to dredging to determine the dredging parameters. Dredging will be scheduled to avoid holiday periods, the San Diego County Fair and horse racing seasons, peak months of public beach use (e.g., summer and spring break), grunion runs, and bird nesting season.

The initial dredging is expected to last 42 days if the maximum amount of sediment is removed. A combination of a front-end loader, scraper, backhoe, and cutterhead dredge will be used for inlet maintenance. The type of equipment used will be determined by the volume of sand and inundation.

Maintenance dredging will remove up to 16,000 cubic yards of sand from the inlet channel west of the railroad bridge and if necessary, an additional 5,000 cubic yards from the inlet channel east of the railroad bridge. Maintenance dredging is expected to occur approximately every eight months. Actual volumes of dredge material and frequency of dredge events may be less depending on the amount of natural sand transport that has occurred.

Sand within the inlet is from littoral, not riverine, processes. This sand has the same physical and chemical characteristics as sand on the adjacent beaches. Testing has shown the sand to be free of contaminants and bacteria.

### **3.2 Replenishment of Beach Sand at Del Mar Beach**

Sand from inlet dredging will be placed on the beach immediately north and south of the inlet (at DS40 on Figure 2). Sand will be placed in the winter season, preferably near the end of the season, to minimize the possibility that large storms will move the sand offshore. A 500 foot buffer will be observed on either side of the inlet to prevent immediate migration of sand back into the inlet and channel. Sand will be placed on approximately 1,600 feet of beach between 7 feet National Geodetic Vertical Datum (NGVD) and mean lower low water (MLLW). Approximately 89,000 cubic yards will be placed on the beach during the initial dredging. Up to 21,000 cubic yards from inlet maintenance dredging will be placed on the beach every 8 months.

### **3.3 Restoration of Tidal Wetlands**

The primary goal of SCE's restoration project is to restore a significant portion of the lagoon west and east of Interstate 5 (I-5) to tidal wetlands consisting of subtidal, intertidal mudflat, coastal salt marsh, and transitional wetland habitats (Figure 1). To the west of I-5, a tidal basin will be created on the old airfield property, and San Diego's old sewage treatment ponds will be converted to coastal salt marsh and transitional wetlands. On the east side of I-5, coastal salt marsh will be created north and south of the San Dieguito River and transitional wetland habitat will be created to mitigate for impacts resulting from the restoration project.

The tidal wetland restoration component will involve the excavation and grading of 217.4 acres of tidal and upland areas and will result in approximately 2,008,500 cubic yards of excavated material. Approximately 135,300 cubic yards will be used for berm construction and 29,100 cubic yards for constructing the base of the nesting sites. The 2,094,600 cubic yards of excavated soil not used for berm and nest site construction will be placed at six upland disposal sites.

### 3.4 Berms and Slope Protection Measures

Berms will be constructed along portions of the San Dieguito River channel to maintain flow velocity and river sediment flow through the lower valley consistent with existing conditions (Figure 1). The primary intent of the berms will be to maintain the existing rate of channel scour from El Camino Real to the Pacific Ocean and to not alter the existing patterns of storm water flooding. Three river berms have been incorporated into the restoration plan. The westernmost berm (B7) will be located west of I-5 and south of the San Dieguito River. It will run in a slightly southwesterly direction from I-5 for approximately 1,825 feet. The top of the berm will vary in elevation from +16.5 feet, NGVD to +17.5 feet, NGVD with a footprint of approximately 4.4 acres. Its purpose is to keep high velocity river flows from entering the tidal basin (Area W1) and resulting in sedimentation.

A second berm (B8) will be located east of I-5 on the north side of the San Dieguito River. This berm will be the longest of the three berms, extending for approximately 4,250 feet from about I-5 east to the end of the Via de la Valle property (DS32). The top of this berm will range from elevation +18.5 feet, NGVD to +19.8 feet, NGVD. This berm, which will have a footprint of approximately 8.4 acres, will separate the northernmost intertidal lagoon (W4 and W16) from the San Dieguito River. The purpose of this berm will be to prevent reduction of river velocity and avoid the deposition of river sediments within the intertidal lagoon (W4 and W16). A weir will be incorporated into the eastern end of this berm to eliminate any backwater effect of the berm on the upstream river channel during flood events.

The third berm (B9), located east of I-5 and south of the San Dieguito River, will consist of an eastern and a western portion. The western portion, which will be constructed in an east/west orientation, will be 875 feet in length. The eastern berm, which will run northwest to southeast, will be approximately 625 feet in length. The elevation at the top of the berms will be +19.0 feet, NGVD. The combined footprint of the two portions will be approximately 1.9 acres. The two berm segments have been designed to tie into an existing upland area that will be converted to a nesting site (NS14). The western berm will prevent the San Dieguito River flows from entering the intertidal lagoon (W6a and W6b), while the eastern berm will protect the nesting site from overland flood flows from the east.

All berms will be constructed with a landscaped trapezoidal cross-section. The base width of each berm will vary depending on the post-construction ground elevation on either side of the berm. The top of the berms will be approximately 20 feet wide. The slopes of the berms will vary from 2:1 to 4:1 depending on slope treatment. The southern side of berm B8, which will be protected with a combination of geogrid reinforced imported fill, stone revetment, and vegetation, will have a slope gradient of 3:1. The top elevation of the slope will be above the design high water elevation. In general, the top of the berms will range from +16.5 feet, NGVD at about river mile 0.75 to +19.8 feet, NGVD at river mile 2.1.

These berms will not control the extent of flooding or change water levels, but rather the berms will direct river flow, maintain existing water velocities, and maintain sediment transport during storm events. Culverts will be placed through the two main river berms (B7 and B8) to help balance water levels in the tidal lagoons and river channel during flood events.

The tops of the berms will be revegetated except where trails or maintenance paths are provided. The slopes of berms B7 and B9 and the north facing slope of berm B8 will be revegetated with the native species. The riverside of berm B8 will be provided with additional slope protection.

The restoration project requires slope protection for several elements, including the berm slopes, one section of the San Dieguito River bank, one of the adjoining freeway slopes, the slopes formed to create nesting sites, and the slopes created to dispose of dredge material in upland areas. Proposed slope protection ranges from armoring to the use of erosion control landscaping. Stone revetments will be used as slope protection in three areas. These areas are indicated on Figure 3. The westernmost area (identified as Stone Revetment No. 1) will protect the portion of the San Dieguito River bank that is located approximately 600 feet east of the Jimmy Durante Bridge. The area is situated on the south side of the inlet channel where the San Dieguito River turns and flows in a northwest direction. This 600±-foot long section of stone revetment will be placed on the south side of the inlet channel in order to protect the slope from changes in river scour associated with river flow modifications stemming from the creation of the tidal basin (W1). Figure 4 shows a typical section of slope protection at this location. Note that the majority of this rock extends below the tidally-driven water surface, with the only exposed rock essentially cleaning up and providing a uniform protective edge to the coastal trail in this vicinity.

Stone Revetment No. 2 is approximately 1,200 feet in total length and located approximately 1,800 feet upstream of Interstate 5, protecting the concave bend in the current river alignment where the proposed earthen berm would be at risk from increased scour associated with flood flows passing through this 600± foot radius bend in the river. As with Stone Revetment No. 1, this 90+ degree bend in the river generates relatively deep design scour depths, requiring a stone revetment throughout the entire bend to protect both the berm and the underlying streambank material supporting this northerly berm, which in turn protects the Wetland Area W4. Figure 5 shows a typical section of slope protection at this location.

Stone Revetment No. 3, located approximately 1,500 feet upstream of Stone Revetment No. 2, is approximately 700 feet in total length and abuts up to the western edge of the horse park, providing additional scour protection to the easterly edge of the earthen berm, separating the Wetland Area W4 from the main river. As with Stone Revetment Nos. 1 and 2, Stone Revetment No. 3 also provides additional scour protection to the most upstream river bend, where an existing approximately 950-foot radius bend in the river initiates channel meandering within the lower reaches of the San Dieguito River system downstream of the El Camino Real bridge. Stone Revetment No. 3 also incorporates an

approximately 295-footwide weir section designed to bypass a small portion of flood flows exceeding the 25-year design storm (approximately 14,000 cfs) in order to eliminate any upstream backwater effects associated with the proposed project. Figure 6 shows a typical section of the rock slope protection through the upstream weir section. Figure 7 illustrates the plan view of the weir.

All of the stone revetments utilize launching aprons designed so that as scour occurs, the rock revetment can launch or flex downward sufficiently to prevent the scour from undermining the river bank and causing geotechnical instability of the overlying berm. The launching apron has been designed in conformance with the U.S. Army Corps of Engineers Waterways Experiment Station (WES) Stream Investigation and Streambank Stabilization Handbook. The “self-launching” approach offers economy and ease of construction by allowing the stream, rather than the contractor, to perform the excavation. However, it does require a larger volume of rock toe protection than would be required if the toe stone were extended down to the design scour depth necessary for bank protection. The self-launching approach also minimizes environmental disturbance in wetland areas, while still providing the necessary toe protection considered essential to the long-term stability of the earthen berm.

A geosynthetic filter fabric will be installed to prevent the loss of sediments from behind and beneath all three stone revetments. The filter fabric will incorporate a pleated section below the launching apron to accommodate differential erosion beneath the apron and include a weighted end to maintain contact with the developing scour hole, while still protecting the underlying streambank sediments from flood-induced scour. The remaining portion of the earthen berm along the northern side of the channel upstream of Interstate 5 incorporates a 20-foot-wide geogrid-reinforced imported erosion-resistant clayey sand fill to minimize flood-induced streambank scour along the southern slope of the berm. The earthen berm maintains a 20-foot-wide top width, with a 6-inch minimum crushed rock-wearing surface to accommodate limited vehicular traffic.

In the vicinity of the easterly weir, near Station 2.31, the weir side slopes descend at a gradient of 20 percent (a 5:1 slope inclination) to accommodate vehicular traffic atop the berm. As there is an approximately 6-foot depression in the northern berm to accommodate the weir, and the 20-foot travelway is maintained through the weir section, about 20 feet of rock exists on the river side of the concrete roadway surface, and 13 feet on the northerly wetland side of the weir. All of this rock will also be covered with topsoil and revegetated. With the weir only being inundated on average once in 25 years, this vegetated section should also stabilize well.

Several feet of topsoil covers the majority of the project limits, most of which will be stockpiled and re-used as capping material to facilitate revegetation. A considerable amount of the underlying soils consist of fine sands and fine sandy silts, both of which are highly susceptible to streambank erosion. Near-surface estuarine deposits also exist, consisting of soft silty clays and clayey to fine sandy silts, generally considered suitable for re-use as exposed mud flats, however again highly erodible and unsuitable for the exposed southerly face of the earthen (B8) berm fill.



As indicated in the figures for both the stone revetments and the earthen embankment, stockpiled topsoil will cover both the southerly and northerly embankment slopes to facilitate the revegetation of the northern river berm. Although the geogrid-reinforced imported erosion-resistant clayey sand fill and the stone revetments are intended to minimize streambank erosion, it is this outer 1- to 2-foot-thick topsoil cover that will first be exposed to streambank scour, possibly requiring occasional reapplication where any large areas of stone revetment become exposed, or possibly the more sterile erosion-resistant imported clayey sand fill. It is the intent, however, that the existing topsoil cover will facilitate germination of native plant species, and although some streambank erosion is anticipated within this topsoil cover, the vegetation, once established, will help stabilize and minimize the need for any rehabilitation of the surficial topsoil cover.

### 3.5 Upland Dredge Material Disposal Areas

The 2,094,600 cubic yards of excavated soil not used for berm and nest site construction will be placed at six upland disposal sites (Figure 2 ). Disposal sites will be hydroseeded with a native grassland and coastal sage scrub seed mix, but will not be irrigated or kept free of nonnative plant species that may colonize the areas.

#### Disposal Site Summary

Site No.	Area (Acres)	Disposal Volume (yd <sup>3</sup> )
DS32	32.7	913,000
DS33	14.2	121,000
DS34	9.5	47,000
DS35	3.9	70,000
DS36	27.5	677,000
DS40	16.1	91,000
TOTAL	103.9	1,919,000

### 3.6 Nesting Areas

SCE will construct four least tern nesting sites and rehabilitate an existing site using material from dredging of the inlet and soil excavated to create tidal wetlands (Figure 2). The five sites will provide a total of 14.4 acres of flat nesting area for the California least tern, western snowy plover, and other shorebirds. The nesting sites will be at a higher elevation than the surrounding wetlands to protect them from tidal inundation. The nesting sites will occupy approximately 19.3 acres; the footprint is larger than the nesting area to provide adequate distance for side slopes. The location and size of the four created sites was determined through consultation with the USFWS, California Department of Fish and Game (CDFG), and the CCC.

The base of the nesting sites will be constructed using soil excavated from other restored areas. Sand removed from the old airfield property will be used as nesting site material pending the approval of the USFWS, CDFG, and CCC. Approximately 29,100 cubic

yards will be used to create the base and approximately 55,500 cubic yards of sand will be used to create the nesting surface. The nesting surface shall consist of a mixture of 80 percent coarse sand and 20 percent shell fragments, and shall be free of viable weed seeds, organic matter, and dark material.

### **3.7 Coast to Crest Trail and Associated Water Quality Features**

A 2.7 mile long segment of the Coast to Crest Trail, from Jimmy Durante Bridge to west of El Camino Real, would be constructed by the JPA as part of this project (Figure 2). Trail segments would generally consist of polymer binder-hardened or stabilized cement with native soil or decomposed granite shoulders. One segment will consist of a boardwalk.

The JPA will also construct and maintain 0.76 acre treatment wetlands immediately south of the Albertson's shopping center (Figure 8). This area is a collection point for a 313-acre watershed primarily consisting of residential development north of Via de la Valle. There are currently no known structural best management practices to treat urban runoff prior to it flowing to the San Dieguito River. Construction of the ponds will provide treatment for urban runoff. Construction of the ponds will also result in the removal of a large area of nonnative plants that could have otherwise spread to the wetland restoration areas. The ponds should also intercept the majority of exotic plant species that may wash down from residential areas before they enter the wetland restoration area. The JPA will also install and maintain a trash rack, sediment trap, and oily water separator.

### **3.8 Villages Wetland Mitigation Bank**

SCE also proposes to create an approximately 20.8 acre wetland mitigation bank adjacent to the restoration area (Figure 2). The bank will contain tidal marsh habitat that will be contiguous with tidal marsh habitat restored by SCE to fulfill mitigation requirements for SONGS. Creation of the bank will result in impacts to 6.36 acres of jurisdictional seasonal marsh and result in the creation/habitat conversion of 20.84 acres of tidal marsh habitat. This will result in a net increase of 14.48 acres of tidal salt marsh available for credit within the bank.

The Regional Board is not signatory to the banking agreement. Including the work necessary to create the bank in this Order does not equate to approval of the banking instrument nor is it a *de facto* approval of future uses of the bank.

#### **4.0 LOCATION AND LAND USE**

The project area is located in the San Dieguito River Valley within the City of Del Mar (Del Mar) and the northern portion of the City of San Diego (San Diego) (Figures 9 and 10). The project site occurs within the San Dieguito Hydrologic Unit, Solana Beach Hydrologic Area (905.10).

Via de la Valle forms the northern boundary of the site, the Pacific Ocean forms the western boundary of the site, and El Camino Real borders the eastern portions of the site. The North County Transit District rail line crosses through the western portion of the site. Five bridges cross the San Dieguito River within the project site. From west to east, they include Camino Del Mar (U.S. Highway 101), the AT&SF Railroad, Jimmy Durante Boulevard, Grand Avenue, and I-5. The City of Del Mar operates a public works yard east of the railroad and south of the river. An existing forced-main sewer line crosses the river, generally along the river bottom, from a pump station located on the fairgrounds to the Del Mar public works yard. Utility power line easements cross portions of the project area.

Existing land uses adjacent to the project area include public recreation, retail/commercial, residential, agricultural, and vacant areas. The Scripps Preserve, a pedestrian overlook, is located on the ocean bluffs north of the river overlooking the river mouth. Other adjacent land uses include a hotel, driving range (Surf and Turf), and a mini golf center, located north of the river on the west side of I-5 (southwest quadrant of the I- 5/Via de la Valle intersection). A community commercial center, which includes a grocery store and other supporting uses, is located in the southeast quadrant of the same intersection. South of the project area, existing land uses include protected hillsides, residential uses, and vacant areas. To the east, adjacent land uses include agricultural and vacant lands as well as newly constructed residential uses.

#### **5.0 DISCHARGE DESCRIPTION**

The project will result in the discharge of waste, defined as the placement of fill material (e.g., soil, riprap, culverts), into 4.527 acres of waters of the United States and State, including San Dieguito Lagoon and River. This Order also addresses the discharge of waste to the San Dieguito Lagoon and Pacific Ocean resulting from initial and periodic maintenance dredging activities within the lagoon inlet and disposal of dredged material. Impacts to jurisdictional waters of the U.S. (in acres) are summarized in the Table 1.

This Order only addresses those project components to be implemented by SCE and the JPA, as identified in the table above. Additional restoration activities that have been identified in the JPA's Park Project (e.g., nature center, wetland creation) are not authorized by this Order.

## 6.0 BASIN PLAN BENEFICIAL USES, WATER QUALITY OBJECTIVES, AND PROHIBITIONS

*The Water Quality Control Plan for the San Diego Basin (9)* (Basin Plan), adopted on September 8, 1994 and amended on May 5, 1998, designated potential and established beneficial uses for surface and ground waters within the San Diego region. Beneficial uses within the project area are summarized in the table below.

Beneficial Use <sup>1</sup>	Surface Water			Ground Water <sup>2</sup>
	San Dieguito River	San Dieguito Lagoon	Pacific Ocean	
Municipal and Domestic Supply	◆			■
Agriculture Supply	○			■
Industrial Process Supply	○		■	■
Contact Water Recreation	■	■	■	
Non-contact Water Recreation	■	■	■	
Commercial and Sport Fishing			■	
Warm Freshwater Habitat	■			
BIOL		■	■	
Estuarine Habitat		■		
Marine Habitat		■	■	
Wildlife Habitat	■	■	■	
Rare, Threatened, or Endangered Species		■	■	
Migration of Aquatic Organisms		■	■	
Spawning, Reproduction, and/or Early Development			■	
Navigation			■	
Aquaculture			■	
Shellfish Harvesting			■	

1. ■ = Existing Beneficial Use; ○ = Potential Beneficial Use; ◆ = Excepted from Beneficial Use

2. These uses do not apply westerly of the easterly boundary of the right-of-way of Interstate 5 and this area is excepted from the sources of drinking water policy.

The Basin Plan established the following Water Quality Objectives for surface waters within the Solana Beach HA (all units are mg/L unless otherwise noted):

Constituent	Concentration
Total Dissolved Solids	250
Chloride	250
Sulfate	250
Percent Sodium	60
Nitrogen and Phosphorus	a
Iron	0.3
Manganese	0.05
Methylene Blue-Activated Substances	0.5
Boron	0.75
Turbidity (NTU)	20
Color Units	20
Fluoride	1

a. Concentrations of nitrogen and phosphorus, by themselves or in combination with other nutrients, shall be maintained at levels below those which stimulate algae and emergent plant growth. Threshold total Phosphorus (P) concentrations shall not exceed 0.05 mg/l in any stream at the point where it enters any standing body of water, nor 0.025 mg/l in any standing body of water. A desired goal in order to prevent plant nuisances in streams and other flowing waters appears to be 0.1 mg/l total P. These values are not to be exceeded more than 10% of the time unless studies of the specific body in question clearly show that water quality objective changes are permissible and changes are approved by the Regional Board. Analogous threshold values have not been set for nitrogen compounds; however, natural ratios of nitrogen to phosphorus are to be determined by surveillance and monitoring and upheld. If data are lacking, a ratio of N:P =10:1 shall be used.

The Basin Plan established the following Water Quality Objectives for ground waters within the Solana Beach HA:

Constituent	Concentration
Total Dissolved Solids	1500 <sup>a</sup>
Chloride	500 <sup>a</sup>
Sulfate	500 <sup>a</sup>
Percent Sodium	60
No3	45 <sup>a</sup>
Iron	0.85 <sup>a</sup>
Manganese	0.15 <sup>a</sup>
Methylene Blue-Activated Substances	0.5
Boron	0.75 <sup>a</sup>
Turbidity (NTU)	5
Color Units	15
Fluoride	1

a. Detailed salt balance studies are recommended for this area to determine limiting mineral concentration levels for discharge.

The Basin Plan established the following Waste Discharge Prohibitions pursuant to California Water Code §13243:

- Prohibition No. 1. The discharge of waste to waters of the state in a manner causing, or threatening to cause a condition of pollution, contamination, or nuisance as defined in California Water Code §13050, is prohibited.
- Prohibition No. 2. The discharge of waste to land, except as authorized by waste discharge requirements or the terms described in California Water Code §13264 is prohibited.
- Prohibition No. 3. The discharge of pollutants or dredged or fill material to waters of the United States except as authorized by an NPDES permit or a dredged or fill material permit (subject to the exemption described in California Water Code §13376) is prohibited.
- Prohibition No. 7. The dumping, deposition, or discharge of waste directly into waters of the state, or adjacent to such waters in any manner which may permit its being transported into the waters, is prohibited unless authorized by the Regional Board.
- Prohibition No. 14. The discharge of sand, silt, clay, or other earthen materials from any activity, including land grading and construction, in quantities which cause deleterious bottom deposits, turbidity or discoloration in waters of the state or which unreasonably affect, or threaten to affect, beneficial uses of such waters is prohibited.

## **7.0 CALIFORNIA ENVIRONMENTAL QUALITY ACT**

A joint Environmental Impact Report (EIR)/Environmental Impact Statement (EIS) was prepared pursuant to the CEQA and NEPA, respectively. The JPA was the lead agency for CEQA and the USFWS was the lead agency for NEPA. The EIR/S addresses the entire 440 acre restoration area, including SCE's portion of the restoration plan.

A Notice of Preparation (NOP) was distributed for the project on June 1, 1998. A formal scoping hearing was held on June 15, 1998. An amended NOP was issued on February 16, 1999 to address changes in the project description. Specifically, project boundaries had been expanded to include additional acreage for habitat restoration and dredge disposal. Responses to the NOP and comments from the scoping hearing were incorporated into the EIR/S. The EIR/S identified the Mixed Habitat alternative as the lead agencies preferred alternative. The EIR was certified on September 15, 2000 by the JPA.

### **7.1 Hydrology and Water Quality**

The proposed project has the potential to impact water quality and designated beneficial uses. The EIR/S identified the following significance criteria, impacts, and mitigation measures for impacts to hydrology and water quality.

Significance Criteria for Hydrology. Impacts of the proposed project on river and lagoon hydrology would be considered significant if:

1. A change in the floodplain or floodway boundary occurred that either substantially increased the floodplain footprint or exacerbated flooding conditions within areas outside of the project footprint or non-project areas designated for open-space habitat conservation.
2. River or debris flow conditions were substantially altered, potentially causing damage to structures or exposing the public to substantial risk.
3. The amount of river sediments destined for the beach and littoral cell is substantially reduced.

Significance Criteria for Coastal Processes. Impacts of the proposed project on the coastal hydrology would be considered significant if alterations in tidal inlet or nearshore currents are produced that substantially increase the erosion rate of beach sediments, modify beach or nearshore bottom topography, or increase risks of damage to coastal structures.

Significance Criteria for Water and Sediment Quality. Impacts from the proposed project to water and sediment quality would be considered significant if:

1. Increased runoff associated with construction of impervious surfaces substantially alters beneficial uses of groundwater.

2. Changes in hydrological conditions result in sedimentation in downstream areas and/or alterations in circulation patterns that substantially inhibit mixing or promote stagnation.
3. Pollutants are generated or released to the environment that are in violation of applicable federal or state standards, hazardous to human health, or deleterious to biological communities.
4. Disposal of dredged sediments/excavated soils results in substantial adverse changes to water or sediment quality, toxicity or bioaccumulation of contaminants in aquatic biota, or declines in wildlife habitat.

The EIR/S concludes that “Overall, impacts to hydrology and water quality associated with this proposed alternative are considered beneficial (Class IV), because the project would provide protection for off-channel habitat and improve circulation and tidal exchange within the lagoon. Additionally, one of the public access components, the wetlands treatment ponds, would provide a mechanism for improving the quality of storm water runoff from adjacent urban areas (e.g., shopping center) that eventually drain into the San Dieguito River. Some construction-related impacts to water quality are considered significant, but mitigable (Class II); these are generally temporary and localized in extent. “

The EIR/S identifies the following mitigation measures for impacts to water quality and hydrology.

1. The contractor shall attend a pre-construction meeting with the JPA’s Principal Planner, and other agency representatives as specified by future permits, to review all required environmental mitigation measures prior to the commencement of any construction activity.
2. Prior to the utilization of any construction staging areas, temporary berms/cofferdams shall be constructed around the staging areas to prevent the transport of spilled materials into adjacent waterways.
3. The contractor shall take all appropriate precautions to avoid spillage or leakage of hazardous materials, such as petroleum products, all fueling and maintenance of construction vehicles shall occur either off-site or be limited to the designated staging areas.
4. The contractor shall be responsible for removing and properly disposing of any hazardous materials that are brought onto the construction site as a result of construction activity and/or removing and properly disposing of any soils that become contaminated during the construction process through example spillage or leakage. All such contaminated areas shall be cleaned up prior to preparing the construction site and temporary construction staging areas for revegetation. The contractor shall prepare, submit to the JPA and any other designated agencies for review and approval, and follow the recommendation of a spill prevention and contingency plan.
5. The contractor shall construct additional temporary berms around fuel storage areas that are maintained for the full time during which construction is occurring



- and construction equipment is present on the site, and all fuel storage areas shall be confined to designated construction staging areas.
6. The contractor shall construct berms or erect silt curtains around areas being excavated/graded to reduce soil losses to waterways.
  7. The contractor shall control fugitive dust emissions through watering or other accepted standard methods of control.
  8. Water quality monitoring shall be implemented for the following:
    - a. Monitor the dewatering effluent to demonstrate that the effluent quality has achieved the appropriate receiving water criteria. Construction may be halted if effluent levels are not within established criteria.
    - b. Conduct water quality monitoring during dredging/construction activities; if monitoring results indicate excessive impacts (e.g., depressed dissolved oxygen concentrations), modifications to construction or sediment disposal methods to lessen the magnitude of the impacts shall be developed and implemented in consultation with the appropriate permitting agencies. All designated fill slopes shall be hydroseeded and landscaped within 30 days of completion of grading activities.
  9. Temporary sedimentation and desilting basins, to be located between graded areas and adjoining wetlands shall be constructed and maintained until the potential for erosion of graded areas has been minimized through the successful establishment of erosion control landscaping.

For impacts related to public access/interpretation, the following mitigation measures shall be made conditions of future park proposals within the project area, as well as conditions of any future required permits, such as a Coastal Development Permit:

10. The JPA shall agree to expand its current trail maintenance program to cover the trails located within the current project area. This maintenance program shall include the requirement to perform regular trail maintenance, including manure and trash removal from and around the trail. Trail tread maintenance intended to avoid erosion problems on natural soil surfaced trails shall occur on as-needed basis. The maintenance program shall include a monitoring component that will determine when and how often trail cleanup should occur. This could result in more frequent maintenance, but under no circumstances shall trail cleanup occur less than once every two weeks. If seasonal tram use is permitted on the Coast to Crest, then trail cleanup should occur daily during the period in which trams are using the trail.

For impacts related to the 22nd District Agricultural Association's use of Area U18, the following mitigation measures shall be made conditions of any future lease or other agreement between the JPA and the 22nd District:

11. The 22nd District Agricultural Association shall agree to implement a routine maintenance program for the area that would include regular trash and debris cleanup, routine removal of manure from the site, protection of slope vegetation

to ensure adequate erosion control on adjoining slopes, routine dust control, and proper drainage of the site that is directed away from the adjoining wetlands.

## **7.2 Beneficial Uses**

Potential impacts to designated beneficial uses are addressed in the Biological Resources section and sections 3.2 and 3.4 of the EIR/S.

The EIR/S identified the following significance criteria for impacts to biological resources.

- 1 Substantial adverse effects would occur to individuals or the habitat of a rare, threatened, endangered species, or other special status species.
- 2 Substantial adverse effects would occur to a species, natural community, or habitat or that is specifically recognized as biologically significant in local, state, or federal policies, statutes, or regulations.
- 3 Substantial adverse effects would occur to the migration of fish or wildlife populations.
- 4 Substantial adverse modification would occur to species diversity or ecosystem functions and values beyond the immediate vicinity of the project site.
- 5 Substantial conflict would occur with local, state, or federal policies designed to protect biological resources.

All of the action alternatives would greatly increase the acreage of tidal habitats in the project area, resulting in beneficial impacts. All project alternatives involve the loss of relatively small areas (4-5 acres) of existing tidal habitats that would be converted to other types of habitat as part of the restoration. However, there would be no net loss of acreage of any tidal habitat. The overall net gain in acreage of tidal wetlands is substantially smaller under the Reduced Berm (preferred) Alternative than for the other alternatives, which in turn differ in the mix of habitat gains provided. Newly created tidal habitats would be expected to undergo colonization by both passive and active dispersal within the first year following their creation. The establishment of plant and animal communities typical of these habitats would take several years, with the longest time required for the upper intertidal levels. There is a net loss of seasonal and transitional wetland habitat acreage associated with each of the restoration alternatives.

Long-term maintenance of the inlet, coupled with the increased tidal prism of the lagoon and wetlands, would result in improved tidal circulation, eliminating the prolonged closures of the lagoon and accompanying episodes of poor water quality and consequent death or injury to marine plants and animals. As a result, any of the action alternatives would have a beneficial impact on tidal habitats and the organisms they support.

## **8.0 BASIS FOR TENTATIVE WASTE DISCHARGE REQUIREMENTS**

Order No. R9-2005-0213 establishes requirements for the discharge of wastes pursuant to Division 7 of the California Water Code and Article 4, Title 23 of the California Water Code, and establishes mitigation and monitoring provisions based on best professional judgment. The Order also includes Section 401 Water Quality Certification. The Basin Plan states “certification is dependent upon the assurances that the project will not reduce water quality below applicable standards as defined in the Clean Water Act (i.e., the water quality objectives established and the beneficial uses which have been designated for the surface waters.)” Standard provisions, reporting and record keeping requirements, and notifications are established in accordance with Division 7 of the California Water Code.

The Order does not address compliance with the California Coastal Commission permit for the operations of SONGS, nor is it an endorsement of the mitigation bank.

### **8.1 Protection of Water Quality and Beneficial Uses**

The proposed project will improve water quality and beneficial uses by maintaining an open inlet to the lagoon and restoring lost tidal functions. Currently, the inlet to the lagoon is closed most of the time. This is due to hydromodifications to the San Dieguito River, lagoon, and inlet. These hydromodifications (Lake Hodges dam, bridges, roads, fill) have limited the natural transport of flood water and sediment which has resulted in an inlet that is closed most of the time. An open inlet will allow for tidal flushing and prevention of low dissolved oxygen conditions and the over-accumulation of nutrients and fine-grained sediment. Initial and annual inlet dredging will improve the beneficial use for contact recreation on the nearby beaches by placing beach-quality sand on the beaches that flank the inlet.

The dredging and disposal process can disturb bottom sediments, leading to the release of pollutants into the water column by the re-suspension of sediment particles and the introduction of pollutants sorbed to sediment particles or present in pore water. Sediment particles are also considered a pollutant when suspended in concentrations that exceed water quality standards.

Best Management Practices (BMPs) will be used for dredging and excavation activities to protect water quality. These will include the use of silt curtains, staging and timing relative to tidal cycles, and compliance with the State Water Resources Control Board Water Quality Order No. 99-08-DWQ, the NPDES General Permit for Storm Water Discharges Associated with Construction Activity.

Chemical laboratory testing of in-situ sediment has occurred and the results show that the sediment is free of contaminants. Additional chemical laboratory testing of the excavated sediment will be conducted to confirm the absence of contaminants before placement on the Del Mar beach. If contaminated sediment is discovered, the sediment will be disposed of at an appropriate facility.

## **8.2 Hydrological Changes**

The proposed stone revetments and berms around the San Dieguito River are designed to maintain existing flood water elevations and sediment transport, prevent siltation of the proposed restoration areas, prevent the river channel from migrating into the proposed restoration areas, and prevent flooding of nearby roads, businesses and residences. This will improve or maintain water quality and beneficial uses by limiting the inundation of restored salt marsh with fresh water and facilitating the transport of sediment through the lagoon and inlet.

The proposed hydrological restoration of the inlet and lagoon will substantially increase the size and function of the tidal prism. Beneficial uses for plant and animal species and water quality will improve significantly due to normalized tidal flow, flushing, and species migration.

## **8.3 Restoration and Mitigation Success**

The proposed Final Restoration Plan (Southern California Edison Company; August 2004) and Monitoring Plan (California Coastal Commission; May 18, 2005) will adequately compensate for impacts to waters of the U.S. and State associated with the discharge of fill material.

Restoration activities are expected to be successful based on the restoration success of nearby Batiquitos Lagoon. The Batiquitos Lagoon restoration was completed in 1996. The proposed San Dieguito Lagoon restoration is very similar to the Batiquitos Lagoon restoration in that the inlet was re-opened to establish continuous tidal flushing and natural recruitment of salt marsh plants was planned. Annual monitoring reports have shown that natural recruitment of salt marsh plants in Batiquitos Lagoon has been successful. Aerial photography, remote sensing, and ground truthing of the restored areas has shown natural plant species in the restored Batiquitos Lagoon has increased substantially. The proposed planting and natural recruitment of appropriate, native species in the freshwater marsh and the low, mid, and high tide elevations in the enlarged and enhanced tidal prism of San Dieguito Lagoon will most likely be successful. Successful recruitment and colonization of native plant species in morphologically restored areas will improve beneficial uses for avian and fish species and recreation opportunities.

Order R9-2005-0213 contains restoration and mitigation performance criteria that must be met. Performance criteria include evidence of wildlife use, evidence of natural recruitment, restored areas are self-sustaining, and that biogeochemical, water quality and hydrologic functions have improved

Additionally, the CCC has required, through Coastal Development Permit (No. 6-81-330-A3, that restoration be successful. To insure this, the CCC will independently monitor the success of the restoration following the construction of the proposed wetlands and

enlarged tidal prism. The CCC has developed a draft monitoring plan that is based on physical, chemical, and biologic functional success criteria. The goal of the CCC's monitoring plan is insure that morphologic restoration is successful for the re-establishment of spawning grounds for benthic and pelagic fish species (estuarine habitat beneficial use).

## **9.0 MONITORING AND REPORTING REQUIREMENTS**

Requirements for monitoring and reporting for the San Dieguito Lagoon Restoration Project are found in Monitoring and Reporting Program No. R9-2005-0213.

## **10.0 NOTIFICATIONS**

The public was notified of this project at the Regional Board internet website on September 10, 2004, the San Diego Union Tribune and North county Times on July 1, 2005 and August 5, 2005.

## **11.0 WRITTEN COMMENTS**

Interested persons are invited to submit written comments on these waste discharge requirements. Comments should be submitted either in person during business hours or by mail to:

John H. Robertus  
Executive Officer  
Attn: Michael Porter  
File No. 05-1371.02  
WDID 9 000 001 371  
California Regional Water Quality Control Board  
9174 Sky Park Court, Suite 100  
San Diego, CA 92123

All comments must be received by **5:00 p.m. on September 7, 2005**, to be considered in the formulation of waste discharge requirements.

## **12.0 PUBLIC HEARING**

Tentative Order No. R9-2005-0213 will be considered by the San Diego Regional Board at a public hearing on September 14, 2005, at the following location:

California Regional Water Quality Control Board  
9140 Sky Park Court  
Suite 100  
San Diego, CA 92123-4340

### **13.0 ADDITIONAL INFORMATION**

For additional information, interested persons may write to the following address or contact Mr. Michael Porter of the Regional Board staff at 858-467-2726.

California Regional Water Quality Control Board  
Attn: Michael Porter  
9174 Sky Park Court, Suite 100  
San Diego, CA 92123

Copies of the tentative waste discharge requirements and other documents (other than those the Executive Officer maintains as confidential) are available at the Regional Board office for inspection and copying. Please contact Ms. Sylvia Wellnitz at 858-637-5593 for file review times and procedures.

### **14.0 WDR REVIEW**

A person may petition the State Board to review the decision of the Regional Board regarding the final WDR. A petition must be made within 30 days of the Regional Board taking an action.

### **15.0 DOCUMENTS USED IN PREPARATION OF THE FACT SHEET AND ORDER**

The following documents were used in the preparation of this fact sheet and Order No. R9-2005-0213:

- a. Application for Section 401 Water Quality Certification and Application/Report of Waste Discharge submitted on September 7, 2004; supplemental material submitted on January 26, 2005 and April 12, 2005.
- b. Coastal Environments. December 10, 2004. *Restored San Dieguito Lagoon Inlet Channel Initial and Periodic Dredging.*
- c. Coastal Environments. February 28, 2005. Letter on the effects of sand placement on Del Mar Beach on nearby kelp beds.
- d. Southern California Edison Company. August 2004. *San Dieguito Wetlands Restoration Project Final Restoration Plan.*
- e. Southern California Edison Company. January 2005. *Villages Wetlands Mitigation Bank, Bank Enabling Instrument.*
- f. U.S. Fish and Wildlife Service and San Dieguito River Park Joint Powers Authority. September 2000. *Environmental Impact Report/Environmental Impact Statement (EIR/EIS) for the San Dieguito Wetland Restoration Project. Volumes I and II. State Clearing House Number 98061010.*

- g. WRA Environmental Consultants. February 16, 2005. Memorandum: *Natural recruitment of salt marsh plant community at Batiquitos Lagoon.*
- h. Project Design Consultants. August 2, 2004. *Storm Water Pollution Prevention Plan, San Dieguito Wetland Restoration Project.*
- i. California Coastal Commission. May 18, 2005. *Monitoring Plan, the S.O.N.G.S. Wetland Mitigation Program*

## 16.0 INTERESTED PARTIES

The following interested parties were identified with the help of SCE:

David J. Farrel  
US Environmental Protection Agency,  
Region IX  
Federal Activities Office Cross Media  
Division  
75 Hawthorne Street  
San Francisco, CA 94105

7575 Metropolitan Dr., Suite 103  
San Diego, CA 92108

Bill Figge  
California Department of Transportation  
(District 11)  
P.O. Box 85406  
San Diego, CA 92186-5406

Rodney R. McInnis  
National Marine Fisheries Service,  
Southwest Region  
501 West Ocean Boulevard, Suite 4200  
Long Beach, CA 90802-4213

Majid Kharrati  
California Department of Transportation  
(District 11) M.S. 35  
2829 Juan St.  
San Diego, CA 92110

Jack Fancher  
U.S. Fish and Wildlife Service  
Carlsbad Field Office  
2730 Loker Ave. West  
Carlsbad, CA 92008

Mary Griggs  
California State Lands Commission  
100 Howe Ave., Suite 100-South  
Sacramento, CA 95825-8202

Robert Smith  
U.S. Army Corps of Engineers  
10845 Rancho Bernardo Rd  
San Diego, CA 92127

Rebecca Bartling  
Del Mar Fairgrounds-22<sup>nd</sup> District  
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2260 Jimmy Durante Blvd.  
Del Mar, CA 92014-2216

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California Coastal Commission  
45 Fremont, Suite 2000  
San Francisco, CA 94105-2219

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California Department of Fish and  
Game, South Coast (Region 5)  
4949 Viewridge Avenue  
San Diego, CA 92123

Sherilyn Sarb  
California Coastal Commission

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City of Del Mar  
1050 Camino del Mar  
Del Mar, CA 92014

John Fisher  
City of San Diego– Development  
Services Department  
1222 First Avenue, Third Floor  
San Diego, CA 92101

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Real Estate Administrator  
North County Transit District  
810 Mission Ave.  
Oceanside, CA 92054

Mark Chomyn  
Sempra Energy  
101 Ash St.  
San Diego, CA 92101-3017

Frisco White  
c/o Nathan Hibbs, MNA Consulting  
Carmel Valley Community Planning  
Board  
427 C Street, Suite 308  
San Diego, CA 92101

Bob Gilleskie  
Torrey Pines Planning Group  
2570 Pinewood St.  
Del Mar, CA 92014

Ann Gardner  
Friends of the San Dieguito River Valley  
P.O. Box 973  
Del Mar, CA 92014-0973

Karen Berger  
San Dieguito River Valley Land  
Conservancy  
P.O. Box 89  
Del Mar, CA 92014

David J. Abrams

Fairbanks Ranch Association  
P.O. Box 8166  
Rancho Santa Fe California 92067

James W. Royle, Jr.  
San Diego Archaeological Society  
P.O. Box 81106  
San Diego, CA 92138-1106

Buena Vista Audubon Society  
P.O. Box 480  
Oceanside, CA 92049-0480

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650 Town Center Drive, 6<sup>th</sup> Floor  
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4180 La Jolla Village Dr., Ste. 150  
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Joan Jackson  
League for Coastal Protection  
1120 Chinquapin Ave.  
Carlsbad, CA 92008

Julie Hamilton  
Save The Beach  
PO Box 2466  
Del Mar, California 92014-1766

Stephen W. Fletcher  
Del Mar Sandy Lane Association  
3004 Sandy Lane  
Del Mar, CA 92014

Douglas Allred  
Douglas Allred Company  
11512 El Camino Real # 100



San Diego, CA 92130

Thomas and Joan Burns  
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of Environmental Science  
Harney Science Center  
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250 Ocean View Ave.  
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Patrick Hochstein  
384 Railroad Ave.  
Nevada City, CA 95959

Jack Jaeger Jr.  
129 10<sup>th</sup> St., B  
Del Mar, CA 92014

Sherook Madon  
Pacific Estuarine Research Laboratory

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Del Mar, CA 92104

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Del Mar, CA 92014